



U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Ref: 8TMS-L

MEMORANDUM

SUBJECT: Analytical Results--- ASARCO / R8080005

FROM: Jack Sheets, Classical Chemist
Michael Bade, Inorganic Chemist
Steven Callio, Laboratory Quality Assurance Officer

THRU: Tony Medrano, Acting Director
Laboratory Services Program

TO: Linda Jacobson, 8ENF-RC
RCRA-Resource Conservation & Recovery Act

Attached are the analytical results for ASARCO R8080005. The table below shows the number of containers received , the work order number(s) assigned, and the date received:

	8710011	8711012	8712004	Total
17-Oct-2007	6	0	0	6
30-Nov-2007	0	19	0	19
20-Dec-2007	0	0	16	16

These samples were prepared, analyzed, and verified by the Technical and Management Services Laboratory according to the requirements of the Laboratory Services Request (LSR) and procedures found in the laboratory Quality Management Plan dated March 31, 2003.

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" to include data validation and data quality assessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004.

Case Comments

Total Recoverable and Synthetic Precipitation Leaching Procedure (SPLP) Metals

Analysts: Jack Sheets and Michael Bade

Introduction:

Six slag samples were received for total recoverable metals analysis by ICP-OES and for synthetic precipitation leaching procedure on October 17, 2007. The results for SPLP are expressed as mg/L. The slag samples were processed to a fine powder using a shatter box.

Digestion Methods:

The samples for total recoverable metals analysis were digested using EPA Region 8 laboratory SOP 102, "Open Beaker Digestion," and EPA method 200.2, "Sample Preparation Procedure for Spectrochemical Determination of Total Recoverable Elements," revision 2.8 from the manual Methods for the Determination of Metals in Environmental Samples, supplement 1, EPA/600/R-94/111, May 1994. The samples for SPLP were prepared using EPA method 1312, "Synthetic Precipitation Leaching Procedure," revision 0 September 1994.

Analytical Methods:

Samples for total recoverable and SPLP metals analysis by ICP-OES were analyzed using EPA Region 8 laboratory SOP 210, "Determination of Elements Using the Optima 5300 DV ICP," and EPA method 200.7, "Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry," from the manual Methods for the Determination of Metals in Environmental Samples, supplement 1, EPA/600/R-94/111, May 1994.

Quality Control Notes:

Routine sample quality control results such as matrix spikes and laboratory duplicates are reported on the quality control pages of this report. Certain of the reported QC criteria may not be applicable. For example, duplicate analysis RPD does not apply if the sample result is less than five times the reporting limit. Matrix spike control limits do not apply if the sample concentration is four times the amount of spike added. Serial dilution analysis RPD does not apply if the original sample concentration is less than 50 times the reporting limit. QC results that meet these criteria may be reported on the QC summary page but should not be evaluated. Applicable QC results not within control limits are discussed in the analyst notes section. Instrument quality control results, such as continuing calibration verification (CCV), continuing calibration blanks (CCB), initial calibration verification (ICV), initial calibration blank (ICB), and instrument blanks (IBL), were within QC criteria unless stated in the analyst notes section.

Analyst Notes:

The solid method blank and method blank spike showed contamination of copper at about 30 mg/kg and zinc at about 380 mg/kg; however, no data were qualified as the lowest sample was over 2000 mg/kg for copper and over 16,000 mg/kg for zinc and the level of contamination is negligible. The nickel matrix spike duplicate failed high at 147%. The matrix spike and two postdigestion spikes were in control, so no data were qualified. The standard reference material had high recoveries at 147% for copper and 246% for zinc. Low level contamination of copper at about 30 mg/kg would explain the high copper result. Low level contamination of zinc at about 300 mg/kg would explain the high zinc result. No results have been qualified due to QC failures caused by low level contamination, as the samples contained high amounts of these analytes.

The SPLP method blank contained small amounts of barium and copper. The results for samples with barium and copper results greater than 10 times the amount in the blank were not flagged as estimated values. The result for

Case Comments

sample 8710011-02 was estimated for barium, and results for samples 8710011-03 and 8710011-04 were estimated for copper, indicated with a "J" flag. The SPLP method spike blank had high recoveries for barium and zinc. Since the matrix spike recoveries were within QC limits, no data were qualified based on blank spike recoveries.

Dissolved Metals

Analysts: Jack Sheets and Michael Bade

Introduction:

Nineteen water samples were received on November 30, 2007, and 16 water samples on December 20, 2007 for dissolved metals analysis by ICP-OES and ICP-MS, and for dissolved mercury analysis. Samples 8712004-15 and 8712004-16 were received after the 28-day mercury holding time expired. The samples were analyzed on December 21, 2007, and the results were flagged "J" as estimated.

Digestion Methods:

The water samples for dissolved mercury were digested using EPA Region 8 laboratory SOP 203, "Determination of Mercury Using the Perkin Elmer FIMS Analyzer," and EPA method 245.1 in Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983 (manual cold vapor atomic absorption).

Analytical Methods:

Samples for metals analysis by ICP-OES were analyzed using EPA Region 8 laboratory SOP 210, "Determination of Elements Using the Optima 5300 DV ICP," and EPA method 200.7, "Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry," from the manual Methods for the Determination of Metals in Environmental Samples, supplement 1, EPA/600/R-94/111, May 1994. The water samples for mercury analysis were analyzed using EPA Region 8 laboratory SOP 203 and EPA method 245.1. Samples for metals analysis by ICP-MS were analyzed using EPA Region 8 laboratory SOP 201, "Determination of Trace Elements by ICP-MS Using Method 200.8," and EPA method 200.8, "Determination of Trace Metals in Water and Wastes by Inductively Coupled Plasma-Mass Spectrometry," from the manual Methods for the Determination of Metals in Environmental Samples, supplement 1, rev. 5.4, EPA/600/R-94/111, May 1994.

Quality Control Notes:

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Analyst Notes:

While most elements were analyzed by both ICP-OE and ICP-MS, all elements were reported by only one method.
Dissolved Metals

Case Comments

Analysts: Jack Sheets and Michael Bade

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Analytical Methods:

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Analyst Notes:

While most elements were analyzed by both ICP-OE and ICP-MS, all elements were reported by only one method.

SPLP Metals

Station ID: SLG-01
EPA Tag No.: SLG-01

Date / Time Sampled: 10/01/07 14:00
Matrix: Soil

Workorder 8710011
Lab Number: 8710011-01 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
SPLP metals	Silver	< 0.0080	mg/L		0.0080	I	01/02/2008	JDS	0700385
SPLP metals	Aluminum	0.570	mg/L		0.100	I	01/02/2008	JDS	0700385
SPLP metals	Arsenic	0.113	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Barium	0.308	mg/L		0.0040	I	01/02/2008	JDS	0700385
SPLP metals	Beryllium	< 0.0010	mg/L		0.0010	I	01/02/2008	JDS	0700385
SPLP metals	Cadmium	0.0023	mg/L		0.0010	I	01/02/2008	JDS	0700385
SPLP metals	Cobalt	0.0050	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Chromium	< 0.0020	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Copper	0.234	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Iron	2.92	mg/L		0.100	I	01/02/2008	JDS	0700385
SPLP metals	Manganese	0.194	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Nickel	< 0.0020	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Lead	0.101	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Antimony	0.414	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Selenium	0.0278	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Thallium	< 0.0200	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Vanadium	< 0.0100	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Zinc	0.688	mg/L		0.0400	I	01/02/2008	JDS	0700385

Station ID: SLG-02
EPA Tag No.: SLG-02

Date / Time Sampled: 10/01/07 14:30
Matrix: Soil

Workorder 8710011
Lab Number: 8710011-02 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
SPLP metals	Silver	< 0.0080	mg/L		0.0080	I	01/02/2008	JDS	0700385
SPLP metals	Aluminum	0.897	mg/L		0.100	I	01/02/2008	JDS	0700385
SPLP metals	Arsenic	0.0518	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Barium	0.104	mg/L	J	0.0040	I	01/02/2008	JDS	0700385
SPLP metals	Beryllium	< 0.0010	mg/L		0.0010	I	01/02/2008	JDS	0700385
SPLP metals	Cadmium	< 0.0010	mg/L		0.0010	I	01/02/2008	JDS	0700385
SPLP metals	Cobalt	< 0.0020	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Chromium	< 0.0020	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Copper	0.132	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Iron	1.05	mg/L		0.100	I	01/02/2008	JDS	0700385
SPLP metals	Manganese	0.0676	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Nickel	< 0.0020	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Lead	0.0246	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Antimony	0.0643	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Selenium	< 0.0200	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Thallium	< 0.0200	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Vanadium	< 0.0100	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Zinc	0.481	mg/L		0.0400	I	01/02/2008	JDS	0700385

Station ID: SLG-03
EPA Tag No.: SLG-03

Date / Time Sampled: 10/01/07 15:05
Matrix: Soil

Workorder 8710011
Lab Number: 8710011-03 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
SPLP metals	Silver	< 0.0080	mg/L		0.0080	1	01/02/2008	JDS	0700385
SPLP metals	Aluminum	0.322	mg/L		0.100	1	01/02/2008	JDS	0700385
SPLP metals	Arsenic	1.12	mg/L		0.0200	1	01/02/2008	JDS	0700385
SPLP metals	Barium	1.55	mg/L		0.0040	1	01/02/2008	JDS	0700385
SPLP metals	Beryllium	< 0.0010	mg/L		0.0010	1	01/02/2008	JDS	0700385
SPLP metals	Cadmium	< 0.0010	mg/L		0.0010	1	01/02/2008	JDS	0700385
SPLP metals	Cobalt	< 0.0020	mg/L		0.0020	1	01/02/2008	JDS	0700385
SPLP metals	Chromium	< 0.0020	mg/L		0.0020	1	01/02/2008	JDS	0700385
SPLP metals	Copper	0.0202	mg/L	J	0.0100	1	01/02/2008	JDS	0700385
SPLP metals	Iron	< 0.100	mg/L		0.100	1	01/02/2008	JDS	0700385
SPLP metals	Manganese	< 0.0020	mg/L		0.0020	1	01/02/2008	JDS	0700385
SPLP metals	Nickel	< 0.0020	mg/L		0.0020	1	01/02/2008	JDS	0700385
SPLP metals	Lead	< 0.0100	mg/L		0.0100	1	01/02/2008	JDS	0700385
SPLP metals	Antimony	4.00	mg/L		0.0200	1	01/02/2008	JDS	0700385
SPLP metals	Selenium	0.0928	mg/L		0.0200	1	01/02/2008	JDS	0700385
SPLP metals	Thallium	< 0.0200	mg/L		0.0200	1	01/02/2008	JDS	0700385
SPLP metals	Vanadium	< 0.0100	mg/L		0.0100	1	01/02/2008	JDS	0700385
SPLP metals	Zinc	0.0691	mg/L		0.0400	1	01/02/2008	JDS	0700385

Station ID: SLG-04
EPA Tag No.: SLG-04

Date / Time Sampled: 10/01/07 15:25
Matrix: Soil

Workorder 8710011
Lab Number: 8710011-04 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
SPLP metals	Silver	< 0.0080	mg/L		0.0080	1	01/02/2008	JDS	0700385
SPLP metals	Aluminum	0.265	mg/L		0.100	1	01/02/2008	JDS	0700385
SPLP metals	Arsenic	0.0548	mg/L		0.0200	1	01/02/2008	JDS	0700385
SPLP metals	Barium	1.48	mg/L		0.0040	1	01/02/2008	JDS	0700385
SPLP metals	Beryllium	< 0.0010	mg/L		0.0010	1	01/02/2008	JDS	0700385
SPLP metals	Cadmium	< 0.0010	mg/L		0.0010	1	01/02/2008	JDS	0700385
SPLP metals	Cobalt	< 0.0020	mg/L		0.0020	1	01/02/2008	JDS	0700385
SPLP metals	Chromium	< 0.0020	mg/L		0.0020	1	01/02/2008	JDS	0700385
SPLP metals	Copper	0.0262	mg/L	J	0.0100	1	01/02/2008	JDS	0700385
SPLP metals	Iron	< 0.100	mg/L		0.100	1	01/02/2008	JDS	0700385
SPLP metals	Manganese	0.0076	mg/L		0.0020	1	01/02/2008	JDS	0700385
SPLP metals	Nickel	< 0.0020	mg/L		0.0020	1	01/02/2008	JDS	0700385
SPLP metals	Lead	0.0758	mg/L		0.0100	1	01/02/2008	JDS	0700385
SPLP metals	Antimony	0.153	mg/L		0.0200	1	01/02/2008	JDS	0700385
SPLP metals	Selenium	0.0826	mg/L		0.0200	1	01/02/2008	JDS	0700385
SPLP metals	Thallium	< 0.0200	mg/L		0.0200	1	01/02/2008	JDS	0700385
SPLP metals	Vanadium	< 0.0100	mg/L		0.0100	1	01/02/2008	JDS	0700385

Project: ASARCO LSR No: R8080005**Certificate of Analysis**

SPLP metals Zinc 0.207 mg/L 0.0400 I 01/02/2008 JDS 0700385

Station ID: SLG-05

Date / Time Sampled: 10/01/07 16:35

Workorder 8710011

EPA Tag No.: SLG-05

Matrix: Soil

Lab Number: 8710011-05 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
SPLP metals	Silver	< 0.0080	mg/L		0.0080	I	01/02/2008	JDS	0700385
SPLP metals	Aluminum	0.115	mg/L		0.100	I	01/02/2008	JDS	0700385
SPLP metals	Arsenic	0.0409	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Barium	0.201	mg/L		0.0040	I	01/02/2008	JDS	0700385
SPLP metals	Beryllium	< 0.0010	mg/L		0.0010	I	01/02/2008	JDS	0700385
SPLP metals	Cadmium	0.0053	mg/L		0.0010	I	01/02/2008	JDS	0700385
SPLP metals	Cobalt	0.0061	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Chromium	< 0.0020	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Copper	0.299	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Iron	0.613	mg/L		0.100	I	01/02/2008	JDS	0700385
SPLP metals	Manganese	0.0889	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Nickel	< 0.0020	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Lead	0.409	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Antimony	0.0485	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Selenium	< 0.0200	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Thallium	< 0.0200	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Vanadium	< 0.0100	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Zinc	0.369	mg/L		0.0400	I	01/02/2008	JDS	0700385

Station ID: SLG-05 duplicate

Date / Time Sampled: 10/01/07 16:35

Workorder 8710011

EPA Tag No.: SLG-05 duplicate

Matrix: Soil

Lab Number: 8710011-06 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
SPLP metals	Silver	< 0.0080	mg/L		0.0080	I	01/02/2008	JDS	0700385
SPLP metals	Aluminum	< 0.100	mg/L		0.100	I	01/02/2008	JDS	0700385
SPLP metals	Arsenic	0.0310	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Barium	0.328	mg/L		0.0040	I	01/02/2008	JDS	0700385
SPLP metals	Beryllium	< 0.0010	mg/L		0.0010	I	01/02/2008	JDS	0700385
SPLP metals	Cadmium	0.0066	mg/L		0.0010	I	01/02/2008	JDS	0700385
SPLP metals	Cobalt	0.0942	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Chromium	< 0.0020	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Copper	0.251	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Iron	0.232	mg/L		0.100	I	01/02/2008	JDS	0700385
SPLP metals	Manganese	0.272	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Nickel	0.0029	mg/L		0.0020	I	01/02/2008	JDS	0700385
SPLP metals	Lead	0.627	mg/L		0.0100	I	01/02/2008	JDS	0700385
SPLP metals	Antimony	0.0330	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Selenium	< 0.0200	mg/L		0.0200	I	01/02/2008	JDS	0700385
SPLP metals	Thallium	< 0.0200	mg/L		0.0200	I	01/02/2008	JDS	0700385

Project: ASARCO LSR No: R8080005

Certificate of Analysis

SPLP metals	Vanadium	< 0.0100	mg/L	0.0100	1	01/02/2008	JDS	0700385
SPLP metals	Zinc	0.308	mg/L	0.0400	1	01/02/2008	JDS	0700385

Metals (Dissolved) by EPA 200 Series Methods

Station ID: AEH-0711-101

Date / Time Sampled: 11/12/07 13:30

Workorder 8711012

EPA Tag No.: AEH-0711-101

Matrix: Water

Lab Number: 8711012-01 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor		By	Batch
						Analyzed			
EPA 200.7	Aluminum ✓	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium ✓	29	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium ✓	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	4.1	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt ✓	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic ✓	8.6	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Copper ✓	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium ✓	213	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium ✓	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.8	Antimony ✓	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead ✓	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

S.

Station ID: AEH-0711-108

Date / Time Sampled: 11/13/07 09:25

Workorder 8711012

EPA Tag No.: AEH-0711-108

Matrix: Water

Lab Number: 8711012-02 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor		By	Batch
						Analyzed			
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	30	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	1.1	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	20.8	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	2.3	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002

Project: ASARCO LSR No: R8080005

Certificate of Analysis

EPA 200.7 Zinc < 40 ug/L 40 1 01/02/2008 JDS 0800002

Station ID: AEH-0711-114

Date / Time Sampled: 11/13/07 13:35

Workorder 8711012

EPA Tag No.: AEH-0711-114

Matrix: Water

Lab Number: 8711012-03 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	30	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	1.8	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	< 4.0	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	33.2	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-118

Date / Time Sampled: 11/14/07 10:12

Workorder 8711012

EPA Tag No.: AEH-0711-118

Matrix: Water

Lab Number: 8711012-04 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	36	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	3.8	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	6.3	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	245	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003

Project: ASARCO LSR No: R8080005**Certificate of Analysis**

EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-121

Date / Time Sampled: 11/14/07 11:39

Workorder 8711012

EPA Tag No.: AEH-0711-121

Matrix: Water

Lab Number: 8711012-05 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution		
						Factor	Analyzed	By
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS 0800002
EPA 200.7	Barium	107	ug/L		4	1	01/02/2008	JDS 0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS 0800002
EPA 200.8	Nickel	1.9	ug/L		1.0	1	01/04/2008	JDS 0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS 0800002
EPA 200.8	Arsenic	< 4.0	ug/L		4.0	1	01/04/2008	JDS 0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS 0800002
EPA 200.8	Selenium	50.7	ug/L		1.0	1	01/04/2008	JDS 0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS 0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS 0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS 0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS 0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS 0800002
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS 0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS 0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS 0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS 0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS 0800002

Station ID: AEH-0711-122

Date / Time Sampled: 11/14/07 12:02

Workorder 8711012

EPA Tag No.: AEH-0711-122

Matrix: Water

Lab Number: 8711012-06 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution		
						Factor	Analyzed	By
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS 0800002
EPA 200.7	Barium	64	ug/L		4	1	01/02/2008	JDS 0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS 0800002
EPA 200.8	Nickel	1.8	ug/L		1.0	1	01/04/2008	JDS 0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS 0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS 0800002
EPA 200.8	Arsenic	412	ug/L		20.0	5	01/04/2008	JDS 0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS 0800002
EPA 200.8	Selenium	39.2	ug/L		1.0	1	01/04/2008	JDS 0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS 0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS 0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS 0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS 0800002
EPA 200.8	Antimony	23.4	ug/L		1.0	1	01/04/2008	JDS 0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS 0800003

Project: ASARCO LSR No: R8080005**Certificate of Analysis**

EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-123

Date / Time Sampled: 11/14/07 12:37

Workorder 8711012

EPA Tag No.: AEH-0711-123

Matrix: Water

Lab Number: 8711012-07 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	36	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	1.3	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	< 4.0	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	2.2	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-124

Date / Time Sampled: 11/14/07 13:52

Workorder 8711012

EPA Tag No.: AEH-0711-124

Matrix: Water

Lab Number: 8711012-08 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	58	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	1.4	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	< 4.0	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.8	Selenium	1.4	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.8	Antimony	1.1	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002

Project: ASARCO LSR No: R8080005**Certificate of Analysis**

EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-127

Date / Time Sampled: 11/15/07 09:49

Workorder 8711012

EPA Tag No.: AEH-0711-127

Matrix: Water

Lab Number: 8711012-09 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	38	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	2.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	< 4.0	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	10.9	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	174	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-128

Date / Time Sampled: 11/15/07 11:19

Workorder 8711012

EPA Tag No.: AEH-0711-128

Matrix: Water

Lab Number: 8711012-10 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	21	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	2.3	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	< 4.0	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	70.1	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002

Project: ASARCO LSR No: R8080005**Certificate of Analysis**

EPA 200.8	Antimony	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-129

Date / Time Sampled: 11/15/07 11:49

Workorder 8711012

EPA Tag No.: AEH-0711-129

Matrix: Water

Lab Number: 8711012-11 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	16	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	4.4	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	11.2	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	282	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	4	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-130

Date / Time Sampled: 11/15/07 12:17

Workorder 8711012

EPA Tag No.: AEH-0711-130

Matrix: Water

Lab Number: 8711012-12 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	22	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	5.3	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	12.1	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	226	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003

Project: ASARCO LSR No: R8080005

Certificate of Analysis

EPA 200.8	Antimony	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-131

EPA Tag No.: AEH-0711-131

Date / Time Sampled: 11/15/07 13:39

Matrix: Water

Workorder 8711012

Lab Number: 8711012-13 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	33	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	5.2	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	9.7	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	64.4	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-139

EPA Tag No.: AEH-0711-139

Date / Time Sampled: 11/16/07 11:33

Matrix: Water

Workorder 8711012

Lab Number: 8711012-14 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	89	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	1.5	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	16.4	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.8	Selenium	4.7	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003

Project: ASARCO LSR No: R8080005

Certificate of Analysis

EPA 200.8	Cadmium	< 0.2	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	9.3	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-165

Date / Time Sampled: 11/27/07 13:45

Workorder 8711012

EPA Tag No.: AEH-0711-165

Matrix: Water

Lab Number: 8711012-15 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L	100	1	01/02/2008	JDS	0800002	
EPA 200.7	Barium	51	ug/L	4	1	01/02/2008	JDS	0800002	
EPA 200.7	Beryllium	< 1	ug/L	1	1	01/02/2008	JDS	0800002	
EPA 200.8	Nickel	6.6	ug/L	1.0	1	01/04/2008	JDS	0800003	
EPA 200.7	Cobalt	< 2	ug/L	2	1	01/02/2008	JDS	0800002	
EPA 200.8	Arsenic	1650	ug/L	40.0	10	01/04/2008	JDS	0800003	
EPA 200.7	Chromium	< 2	ug/L	2	1	01/02/2008	JDS	0800002	
EPA 200.7	Copper	< 10	ug/L	10	1	01/02/2008	JDS	0800002	
EPA 200.7	Iron	< 100	ug/L	100	1	01/02/2008	JDS	0800002	
EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003	
EPA 200.8	Cadmium	0.4	ug/L	0.2	1	01/04/2008	JDS	0800003	
EPA 200.8	Antimony	68.0	ug/L	1.0	1	01/04/2008	JDS	0800003	
EPA 200.7	Manganese	< 2	ug/L	2	1	01/02/2008	JDS	0800002	
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003	
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003	
EPA 200.7	Vanadium	14	ug/L	10	1	01/02/2008	JDS	0800002	
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002	

Station ID: AEH-0711-166

Date / Time Sampled: 11/27/07 14:45

Workorder 8711012

EPA Tag No.: AEH-0711-166

Matrix: Water

Lab Number: 8711012-16 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L	100	1	01/02/2008	JDS	0800002	
EPA 200.7	Barium	31	ug/L	4	1	01/02/2008	JDS	0800002	
EPA 200.7	Beryllium	< 1	ug/L	1	1	01/02/2008	JDS	0800002	
EPA 200.8	Nickel	10.3	ug/L	1.0	1	01/04/2008	JDS	0800003	
EPA 200.7	Cobalt	< 2	ug/L	2	1	01/02/2008	JDS	0800002	
EPA 200.7	Chromium	< 2	ug/L	2	1	01/02/2008	JDS	0800002	
EPA 200.8	Arsenic	13.8	ug/L	4.0	1	01/04/2008	JDS	0800003	
EPA 200.8	Selenium	404	ug/L	1.0	1	01/04/2008	JDS	0800003	
EPA 200.7	Copper	10	ug/L	10	1	01/02/2008	JDS	0800002	
EPA 200.7	Iron	< 100	ug/L	100	1	01/02/2008	JDS	0800002	
EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003	

Project: ASARCO LSR No: R8080005**Certificate of Analysis**

EPA 200.8	Cadmium	< 0.2	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.8	Antimony	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	17	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-167

EPA Tag No.: AEH-0711-167

Date / Time Sampled: 11/27/07 15:10

Matrix: Water

Workorder 8711012

Lab Number: 8711012-17 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	32	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	2.3	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	742	ug/L		40.0	10	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	67.4	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	39.4	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-168

EPA Tag No.: AEH-0711-168

Date / Time Sampled: 11/28/07 09:15

Matrix: Water

Workorder 8711012

Lab Number: 8711012-18 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	34	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	1.8	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	1150	ug/L		40.0	10	01/04/2008	JDS	0800003
EPA 200.8	Selenium	52.2	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002

Project: ASARCO LSR No: R8080005

Certificate of Analysis

EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	49	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	44.5	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	1.0	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-169

Date / Time Sampled: 11/28/07 09:40

Workorder 8711012

EPA Tag No.: AEH-0711-169

Matrix: Water

Lab Number: 8711012-19 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	24	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	1.2	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	409	ug/L		20.0	5	01/04/2008	JDS	0800003
EPA 200.8	Selenium	2.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	843	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	24.3	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-191

Date / Time Sampled: 12/04/07 13:40

Workorder 8712004

EPA Tag No.: AEH-0711-191

Matrix: Water

Lab Number: 8712004-01 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	12	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	1.2	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	331	ug/L		20.0	5	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Copper	21	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	1.1	ug/L		1.0	1	01/04/2008	JDS	0800003

Project: ASARCO LSR No: R8080005**Certificate of Analysis**

EPA 200.7	Iron	< 100	ug/L	100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	1.2	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	6	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	18.7	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	2.6	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	14.6	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	960	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-192

Date / Time Sampled: 12/04/07 14:15

Workorder 8712004

EPA Tag No.: AEH-0711-192

Matrix: Water

Lab Number: 8712004-02 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution			
						Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	< 4	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	< 4.0	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.8	Selenium	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-194

Date / Time Sampled: 12/04/07 15:00

Workorder 8712004

EPA Tag No.: AEH-0711-194

Matrix: Water

Lab Number: 8712004-03 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution			
						Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	< 4	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	< 4.0	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003

Project: ASARCO LSR No: R8080005

Certificate of Analysis

EPA 200.7	Copper	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L	100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-200

Date / Time Sampled: 12/05/07 13:15

Workorder 8712004

EPA Tag No.: AEH-0711-200

Matrix: Water

Lab Number: 8712004-04 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	61	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	4.3	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	17.1	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	65.4	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	0.3	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	521	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-202

Date / Time Sampled: 12/05/07 13:30

Workorder 8712004

EPA Tag No.: AEH-0711-202

Matrix: Water

Lab Number: 8712004-05 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	< 4	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	< 4.0	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002

Project: ASARCO LSR No: R8080005

Certificate of Analysis

EPA 200.7	Copper	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L	100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-205

Date / Time Sampled: 12/05/07 15:20

Workorder 8712004

EPA Tag No.: AEH-0711-205

Matrix: Water

Lab Number: 8712004-06 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor		By	Batch
						Analyzed			
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	< 4	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	< 4.0	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-210

Date / Time Sampled: 12/07/07 10:50

Workorder 8712004

EPA Tag No.: AEH-0711-210

Matrix: Water

Lab Number: 8712004-07 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor		By	Batch
						Analyzed			
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	43	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	1.3	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	2120	ug/L		80.0	20	01/04/2008	JDS	0800003

Project: ASARCO LSR No: R8080005

Certificate of Analysis

EPA 200.7	Chromium	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	6.5	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	8610	ug/L	100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.8	Antimony	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	2760	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	15	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-211

Date / Time Sampled: 12/07/07 13:45

Workorder 8712004

EPA Tag No.: AEH-0711-211

Matrix: Water

Lab Number: 8712004-08 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution			
						Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	65	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	4.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	523	ug/L		20.0	5	01/04/2008	JDS	0800003
EPA 200.8	Selenium	399	ug/L		5.0	5	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	584	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	73.2	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	21.5	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	18	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-219

Date / Time Sampled: 12/10/07 11:45

Workorder 8712004

EPA Tag No.: AEH-0711-219

Matrix: Water

Lab Number: 8712004-09 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution			
						Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	18	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	8.4	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002

Project: ASARCO LSR No: R8080005**Certificate of Analysis**

EPA 200.7	Chromium	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	2740	ug/L	80.0	20	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	260	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L	100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	0.7	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	5880	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	14	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-220

Date / Time Sampled: 12/10/07 13:05

Workorder 8712004

EPA Tag No.: AEH-0711-220

Matrix: Water

Lab Number: 8712004-10 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution			
						Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	23	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	23.4	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	7190	ug/L		400	100	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	436	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	1.0	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	13500	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Thallium	0.4	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	22	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	77	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-234

Date / Time Sampled: 12/11/07 15:45

Workorder 8712004

EPA Tag No.: AEH-0711-234

Matrix: Water

Lab Number: 8712004-11 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution			
						Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	113	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	15	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	4.0	ug/L		1.0	1	01/04/2008	JDS	0800003

Project: ASARCO LSR No: R8080005

Certificate of Analysis

EPA 200.7	Cobalt	5	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	35600	ug/L	2000	500	01/04/2008	JDS	0800003
EPA 200.8	Selenium	22.7	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	1460	ug/L	100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	17.1	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	3060	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	425	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-240

Date / Time Sampled: 12/12/07 11:15

Workorder 8712004

EPA Tag No.: AEH-0711-240

Matrix: Water

Lab Number: 8712004-12 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	30	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	3.1	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	815	ug/L		40.0	10	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	70.6	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	13.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.8	Antimony	43.9	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Thallium	14.8	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	142	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-241

Date / Time Sampled: 12/12/07 11:43

Workorder 8712004

EPA Tag No.: AEH-0711-241

Matrix: Water

Lab Number: 8712004-13 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	56	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002

Project: ASARCO LSR No: R8080005**Certificate of Analysis**

EPA 200.8	Nickel	7.8	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	1130	ug/L	40.0	10	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.7	Copper	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	1610	ug/L	10.0	10	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L	100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	0.2	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	40.6	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: AEH-0711-247

Date / Time Sampled: 12/12/07 15:35

Workorder 8712004

EPA Tag No.: AEH-0711-247

Matrix: Water

Lab Number: 8712004-14 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution			
						Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	199	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	34	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	4.4	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	116000	ug/L		4000	1000	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	63.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	157	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.8	Antimony	8.6	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	62	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	1.5	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	22	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Station ID: EHR-1107-306-METALS

Date / Time Sampled: 11/07/07 11:10

Workorder 8712004

EPA Tag No.: EHR-1107-306-METALS

Matrix: Water

Lab Number: 8712004-15 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution			
						Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	29	ug/L		4	1	01/02/2008	JDS	0800002

Project: ASARCO LSR No: R8080005

Certificate of Analysis

EPA 200.7	Beryllium	< 1	ug/L	1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	1.3	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	< 4.0	ug/L	4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.7	Copper	19	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Iron	< 100	ug/L	100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L	0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L	0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	< 2	ug/L	2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L	0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L	1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L	10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L	40	1	01/02/2008	JDS	0800002

Station ID: EHR-1107-310-METALS

Date / Time Sampled: 11/08/07 08:30

Workorder 8712004

EPA Tag No.: EHR-1107-310-METALS

Matrix: Water

Lab Number: 8712004-16 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Aluminum	< 100	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.7	Barium	58	ug/L		4	1	01/02/2008	JDS	0800002
EPA 200.7	Beryllium	< 1	ug/L		1	1	01/02/2008	JDS	0800002
EPA 200.8	Nickel	4.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Cobalt	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Arsenic	6.1	ug/L		4.0	1	01/04/2008	JDS	0800003
EPA 200.7	Chromium	< 2	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Selenium	33.3	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Copper	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Iron	226	ug/L		100	1	01/02/2008	JDS	0800002
EPA 200.8	Silver	< 0.5	ug/L		0.5	1	01/04/2008	JDS	0800003
EPA 200.8	Cadmium	< 0.2	ug/L		0.2	1	01/04/2008	JDS	0800003
EPA 200.7	Manganese	21	ug/L		2	1	01/02/2008	JDS	0800002
EPA 200.8	Antimony	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.8	Thallium	< 0.3	ug/L		0.3	1	01/04/2008	JDS	0800003
EPA 200.8	Lead	< 1.0	ug/L		1.0	1	01/04/2008	JDS	0800003
EPA 200.7	Vanadium	< 10	ug/L		10	1	01/02/2008	JDS	0800002
EPA 200.7	Zinc	< 40	ug/L		40	1	01/02/2008	JDS	0800002

Metals (Total) by EPA 200 Series Methods

Station ID: SLG-01
EPA Tag No.: SLG-01

Date / Time Sampled: 10/01/07 14:00
Matrix: Soil

Workorder 8710011
Lab Number: 8710011-01 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Silver	22.5	mg/kg		7.8	10	11/28/2007	MFB	0700329
EPA 200.7	Aluminum	17100	mg/kg		98.1	10	11/28/2007	MFB	0700329
EPA 200.7	Arsenic	222	mg/kg		19.6	10	11/28/2007	MFB	0700329
EPA 200.7	Barium	445	mg/kg		3.9	10	11/28/2007	MFB	0700329
EPA 200.7	Beryllium	1.9	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cadmium	5.6	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cobalt	95.5	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Chromium	40.5	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Copper	5380	mg/kg		9.8	10	11/28/2007	MFB	0700329
EPA 200.7	Iron	263000	mg/kg		98.1	10	11/28/2007	MFB	0700329
EPA 200.7	Manganese	16500	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Nickel	28.7	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Lead	633	mg/kg		9.8	10	11/28/2007	MFB	0700329
EPA 200.7	Antimony	< 19.6	mg/kg		19.6	10	11/28/2007	MFB	0700329
EPA 200.7	Selenium	< 19.6	mg/kg		19.6	10	11/28/2007	MFB	0700329
EPA 200.7	Thallium	< 19.6	mg/kg		19.6	10	11/28/2007	MFB	0700329
EPA 200.7	Vanadium	40.5	mg/kg		9.8	10	11/28/2007	MFB	0700329
EPA 200.7	Zinc	17400	mg/kg		39.2	10	11/28/2007	MFB	0700329

Station ID: SLG-02
EPA Tag No.: SLG-02

Date / Time Sampled: 10/01/07 14:30
Matrix: Soil

Workorder 8710011
Lab Number: 8710011-02 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Silver	< 7.9	mg/kg		7.9	10	11/28/2007	MFB	0700329
EPA 200.7	Aluminum	22600	mg/kg		99.3	10	11/28/2007	MFB	0700329
EPA 200.7	Arsenic	119	mg/kg		19.9	10	11/28/2007	MFB	0700329
EPA 200.7	Barium	1040	mg/kg		4.0	10	11/28/2007	MFB	0700329
EPA 200.7	Beryllium	1.6	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cadmium	< 1.0	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cobalt	49.7	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Chromium	53.2	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Copper	2190	mg/kg		9.9	10	11/28/2007	MFB	0700329
EPA 200.7	Iron	238000	mg/kg		99.3	10	11/28/2007	MFB	0700329
EPA 200.7	Manganese	8830	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Nickel	10.0	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Lead	77.8	mg/kg		9.9	10	11/28/2007	MFB	0700329
EPA 200.7	Antimony	< 19.9	mg/kg		19.9	10	11/28/2007	MFB	0700329
EPA 200.7	Selenium	< 19.9	mg/kg		19.9	10	11/28/2007	MFB	0700329
EPA 200.7	Thallium	< 19.9	mg/kg		19.9	10	11/28/2007	MFB	0700329
EPA 200.7	Vanadium	63.6	mg/kg		9.9	10	11/28/2007	MFB	0700329
EPA 200.7	Zinc	17500	mg/kg		39.7	10	11/28/2007	MFB	0700329

Station ID: SLG-03
EPA Tag No.: SLG-03

Date / Time Sampled: 10/01/07 15:05
Matrix: Soil

Workorder 8710011
Lab Number: 8710011-03 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Silver	72.7	mg/kg		7.9	10	11/28/2007	MFB	0700329
EPA 200.7	Aluminum	15000	mg/kg		99.2	10	11/28/2007	MFB	0700329
EPA 200.7	Arsenic	2700	mg/kg		19.8	10	11/28/2007	MFB	0700329
EPA 200.7	Barium	541	mg/kg		4.0	10	11/28/2007	MFB	0700329
EPA 200.7	Beryllium	1.6	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cadmium	7.9	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cobalt	122	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Chromium	78.8	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Copper	16600	mg/kg		9.9	10	11/28/2007	MFB	0700329
EPA 200.7	Iron	198000	mg/kg		99.2	10	11/28/2007	MFB	0700329
EPA 200.7	Manganese	13800	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Nickel	108	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Lead	6090	mg/kg		9.9	10	11/28/2007	MFB	0700329
EPA 200.7	Antimony	345	mg/kg		19.8	10	11/28/2007	MFB	0700329
EPA 200.7	Selenium	77.6	mg/kg		19.8	10	11/28/2007	MFB	0700329
EPA 200.7	Thallium	< 19.8	mg/kg		19.8	10	11/28/2007	MFB	0700329
EPA 200.7	Vanadium	64.2	mg/kg		9.9	10	11/28/2007	MFB	0700329
EPA 200.7	Zinc	108000	mg/kg		39.7	10	11/28/2007	MFB	0700329

Station ID: SLG-04
EPA Tag No.: SLG-04

Date / Time Sampled: 10/01/07 15:25
Matrix: Soil

Workorder 8710011
Lab Number: 8710011-04 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Silver	17.2	mg/kg		7.9	10	11/28/2007	MFB	0700329
EPA 200.7	Aluminum	17500	mg/kg		98.8	10	11/28/2007	MFB	0700329
EPA 200.7	Arsenic	928	mg/kg		19.8	10	11/28/2007	MFB	0700329
EPA 200.7	Barium	801	mg/kg		4.0	10	11/28/2007	MFB	0700329
EPA 200.7	Beryllium	1.6	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cadmium	18.8	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cobalt	393	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Chromium	25.9	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Copper	4780	mg/kg		9.9	10	11/28/2007	MFB	0700329
EPA 200.7	Iron	200000	mg/kg		98.8	10	11/28/2007	MFB	0700329
EPA 200.7	Manganese	9060	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Nickel	19.7	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Lead	6740	mg/kg		9.9	10	11/28/2007	MFB	0700329
EPA 200.7	Antimony	102	mg/kg		19.8	10	11/28/2007	MFB	0700329
EPA 200.7	Selenium	39.8	mg/kg		19.8	10	11/28/2007	MFB	0700329
EPA 200.7	Thallium	< 19.8	mg/kg		19.8	10	11/28/2007	MFB	0700329
EPA 200.7	Vanadium	41.2	mg/kg		9.9	10	11/28/2007	MFB	0700329
EPA 200.7	Zinc	90000	mg/kg		39.5	10	11/28/2007	MFB	0700329

Station ID: SLG-05 **Date / Time Sampled:** 10/01/07 16:35 **Workorder** 8710011
EPA Tag No.: SLG-05 **Matrix:** Soil **Lab Number:** 8710011-05 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Silver	11.7	mg/kg		7.8	10	11/28/2007	MFB	0700329
EPA 200.7	Aluminum	16200	mg/kg		98.1	10	11/28/2007	MFB	0700329
EPA 200.7	Arsenic	189	mg/kg		19.6	10	11/28/2007	MFB	0700329
EPA 200.7	Barium	1040	mg/kg		3.9	10	11/28/2007	MFB	0700329
EPA 200.7	Beryllium	1.6	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cadmium	2.4	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cobalt	94.5	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Chromium	71.1	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Copper	4630	mg/kg		9.8	10	11/28/2007	MFB	0700329
EPA 200.7	Iron	294000	mg/kg		98.1	10	11/28/2007	MFB	0700329
EPA 200.7	Manganese	13000	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Nickel	13.7	mg/kg		2.0	10	11/28/2007	MFB	0700329
EPA 200.7	Lead	770	mg/kg		9.8	10	11/28/2007	MFB	0700329
EPA 200.7	Antimony	< 19.6	mg/kg		19.6	10	11/28/2007	MFB	0700329
EPA 200.7	Selenium	< 19.6	mg/kg		19.6	10	11/28/2007	MFB	0700329
EPA 200.7	Thallium	< 19.6	mg/kg		19.6	10	11/28/2007	MFB	0700329
EPA 200.7	Vanadium	63.5	mg/kg		9.8	10	11/28/2007	MFB	0700329
EPA 200.7	Zinc	16800	mg/kg		39.2	10	11/28/2007	MFB	0700329

Station ID: SLG-05 duplicate **Date / Time Sampled:** 10/01/07 16:35 **Workorder** 8710011
EPA Tag No.: SLG-05 duplicate **Matrix:** Soil **Lab Number:** 8710011-06 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 200.7	Silver	< 7.6	mg/kg		7.6	10	11/28/2007	MFB	0700329
EPA 200.7	Aluminum	20400	mg/kg		95.4	10	11/28/2007	MFB	0700329
EPA 200.7	Arsenic	127	mg/kg		19.1	10	11/28/2007	MFB	0700329
EPA 200.7	Barium	936	mg/kg		3.8	10	11/28/2007	MFB	0700329
EPA 200.7	Beryllium	2.4	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cadmium	< 1.0	mg/kg		1.0	10	11/28/2007	MFB	0700329
EPA 200.7	Cobalt	76.8	mg/kg		1.9	10	11/28/2007	MFB	0700329
EPA 200.7	Chromium	38.2	mg/kg		1.9	10	11/28/2007	MFB	0700329
EPA 200.7	Copper	3460	mg/kg		9.5	10	11/28/2007	MFB	0700329
EPA 200.7	Iron	295000	mg/kg		95.4	10	11/28/2007	MFB	0700329
EPA 200.7	Manganese	22600	mg/kg		1.9	10	11/28/2007	MFB	0700329
EPA 200.7	Nickel	14.9	mg/kg		1.9	10	11/28/2007	MFB	0700329
EPA 200.7	Lead	643	mg/kg		9.5	10	11/28/2007	MFB	0700329
EPA 200.7	Antimony	< 19.1	mg/kg		19.1	10	11/28/2007	MFB	0700329
EPA 200.7	Selenium	< 19.1	mg/kg		19.1	10	11/28/2007	MFB	0700329
EPA 200.7	Thallium	< 19.1	mg/kg		19.1	10	11/28/2007	MFB	0700329
EPA 200.7	Vanadium	64.4	mg/kg		9.5	10	11/28/2007	MFB	0700329
EPA 200.7	Zinc	17200	mg/kg		38.2	10	11/28/2007	MFB	0700329

Project: ASARCO LSR No: R8080005

Certificate of Analysis

Project: ASARCO LSR No: R8080005

Certificate of Analysis

Mercury (Dissolved) by CVAA

Station ID: AEH-0711-101

EPA Tag No.: AEH-0711-101

Date / Time Sampled: 11/12/07 13:30

Matrix: Water

Workorder 8711012

Lab Number: 8711012-01 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-108

EPA Tag No.: AEH-0711-108

Date / Time Sampled: 11/13/07 09:25

Matrix: Water

Workorder 8711012

Lab Number: 8711012-02 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-114

EPA Tag No.: AEH-0711-114

Date / Time Sampled: 11/13/07 13:35

Matrix: Water

Workorder 8711012

Lab Number: 8711012-03 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-118

EPA Tag No.: AEH-0711-118

Date / Time Sampled: 11/14/07 10:12

Matrix: Water

Workorder 8711012

Lab Number: 8711012-04 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-121

EPA Tag No.: AEH-0711-121

Date / Time Sampled: 11/14/07 11:39

Matrix: Water

Workorder 8711012

Lab Number: 8711012-05 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-122

EPA Tag No.: AEH-0711-122

Date / Time Sampled: 11/14/07 12:02

Matrix: Water

Workorder 8711012

Lab Number: 8711012-06 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-123

EPA Tag No.: AEH-0711-123

Date / Time Sampled: 11/14/07 12:37

Matrix: Water

Workorder 8711012

Lab Number: 8711012-07 A

Method	Parameter	Results	Units	Qual-ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Project: ASARCO LSR No: R8080005**Certificate of Analysis**

EPA 7470B Mercury < 0.10 ug/L 0.10 1 12/10/2007 JDS 0700359

Station ID: AEH-0711-124**Date / Time Sampled:** 11/14/07 13:52**Workorder** 8711012**EPA Tag No.:** AEH-0711-124**Matrix:** Water**Lab Number:** 8711012-08 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-127**Date / Time Sampled:** 11/15/07 09:49**Workorder** 8711012**EPA Tag No.:** AEH-0711-127**Matrix:** Water**Lab Number:** 8711012-09 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-128**Date / Time Sampled:** 11/15/07 11:19**Workorder** 8711012**EPA Tag No.:** AEH-0711-128**Matrix:** Water**Lab Number:** 8711012-10 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-129**Date / Time Sampled:** 11/15/07 11:49**Workorder** 8711012**EPA Tag No.:** AEH-0711-129**Matrix:** Water**Lab Number:** 8711012-11 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	0.13	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-130**Date / Time Sampled:** 11/15/07 12:17**Workorder** 8711012**EPA Tag No.:** AEH-0711-130**Matrix:** Water**Lab Number:** 8711012-12 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	0.25	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-131**Date / Time Sampled:** 11/15/07 13:39**Workorder** 8711012**EPA Tag No.:** AEH-0711-131**Matrix:** Water**Lab Number:** 8711012-13 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Project: ASARCO LSR No: R8080005

Certificate of Analysis

Station ID: AEH-0711-139
EPA Tag No.: AEH-0711-139

Date / Time Sampled: 11/16/07 11:33
Matrix: Water

Workorder 8711012
Lab Number: 8711012-14 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-165
EPA Tag No.: AEH-0711-165

Date / Time Sampled: 11/27/07 13:45
Matrix: Water

Workorder 8711012
Lab Number: 8711012-15 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-166
EPA Tag No.: AEH-0711-166

Date / Time Sampled: 11/27/07 14:45
Matrix: Water

Workorder 8711012
Lab Number: 8711012-16 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-167
EPA Tag No.: AEH-0711-167

Date / Time Sampled: 11/27/07 15:10
Matrix: Water

Workorder 8711012
Lab Number: 8711012-17 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-168
EPA Tag No.: AEH-0711-168

Date / Time Sampled: 11/28/07 09:15
Matrix: Water

Workorder 8711012
Lab Number: 8711012-18 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-169
EPA Tag No.: AEH-0711-169

Date / Time Sampled: 11/28/07 09:40
Matrix: Water

Workorder 8711012
Lab Number: 8711012-19 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/10/2007	JDS	0700359

Station ID: AEH-0711-191
EPA Tag No.: AEH-0711-191

Date / Time Sampled: 12/04/07 13:40
Matrix: Water

Workorder 8712004
Lab Number: 8712004-01 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-192 **Date / Time Sampled:** 12/04/07 14:15 **Workorder** 8712004
EPA Tag No.: AEH-0711-192 **Matrix:** Water **Lab Number:** 8712004-02 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-194 **Date / Time Sampled:** 12/04/07 15:00 **Workorder** 8712004
EPA Tag No.: AEH-0711-194 **Matrix:** Water **Lab Number:** 8712004-03 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-200 **Date / Time Sampled:** 12/05/07 13:15 **Workorder** 8712004
EPA Tag No.: AEH-0711-200 **Matrix:** Water **Lab Number:** 8712004-04 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-202 **Date / Time Sampled:** 12/05/07 13:30 **Workorder** 8712004
EPA Tag No.: AEH-0711-202 **Matrix:** Water **Lab Number:** 8712004-05 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-205 **Date / Time Sampled:** 12/05/07 15:20 **Workorder** 8712004
EPA Tag No.: AEH-0711-205 **Matrix:** Water **Lab Number:** 8712004-06 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-210 **Date / Time Sampled:** 12/07/07 10:50 **Workorder** 8712004
EPA Tag No.: AEH-0711-210 **Matrix:** Water **Lab Number:** 8712004-07 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-211 **Date / Time Sampled:** 12/07/07 13:45 **Workorder** 8712004
EPA Tag No.: AEH-0711-211 **Matrix:** Water **Lab Number:** 8712004-08 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
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Project: ASARCO LSR No: R8080005**Certificate of Analysis**

EPA 7470B Mercury < 0.10 ug/L 0.10 1 12/21/2007 JDS 0700387

Station ID: AEH-0711-219 **Date / Time Sampled:** 12/10/07 11:45 **Workorder** 8712004
EPA Tag No.: AEH-0711-219 **Matrix:** Water **Lab Number:** 8712004-09 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-220 **Date / Time Sampled:** 12/10/07 13:05 **Workorder** 8712004
EPA Tag No.: AEH-0711-220 **Matrix:** Water **Lab Number:** 8712004-10 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-234 **Date / Time Sampled:** 12/11/07 15:45 **Workorder** 8712004
EPA Tag No.: AEH-0711-234 **Matrix:** Water **Lab Number:** 8712004-11 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-240 **Date / Time Sampled:** 12/12/07 11:15 **Workorder** 8712004
EPA Tag No.: AEH-0711-240 **Matrix:** Water **Lab Number:** 8712004-12 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-241 **Date / Time Sampled:** 12/12/07 11:43 **Workorder** 8712004
EPA Tag No.: AEH-0711-241 **Matrix:** Water **Lab Number:** 8712004-13 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L		0.10	1	12/21/2007	JDS	0700387

Station ID: AEH-0711-247 **Date / Time Sampled:** 12/12/07 15:35 **Workorder** 8712004
EPA Tag No.: AEH-0711-247 **Matrix:** Water **Lab Number:** 8712004-14 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	1.95	ug/L		0.10	1	12/21/2007	JDS	0700387

Project: ASARCO LSR No: R8080005

Certificate of Analysis

Station ID: EHR-1107-306-METALS
EPA Tag No.: EHR-1107-306-METALS

Date / Time Sampled: 11/07/07 11:10

Matrix: Water

Workorder 8712004

Lab Number: 8712004-15 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L	J	0.10	1	12/21/2007	JDS	0700387

Station ID: EHR-1107-310-METALS
EPA Tag No.: EHR-1107-310-METALS

Date / Time Sampled: 11/08/07 08:30

Matrix: Water

Workorder 8712004

Lab Number: 8712004-16 A

Method	Parameter	Results	Units	Qual- ifier	Report Limit	Dilution Factor	Analyzed	By	Batch
EPA 7470B	Mercury	< 0.10	ug/L	J	0.10	1	12/21/2007	JDS	0700387

Note: "J" Qualifier indicates an estimated value.

SPLP Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch 0700385 - EPA 200.7

Method Blank (0700385-BLK1)

Prepared: 11/08/07 Analyzed: 01/02/08

Silver	< 0.0080	0.0080	mg/L						
Aluminum	< 0.100	0.100	"						
Arsenic	< 0.0200	0.0200	"						
Barium	0.0292	0.0040	"						
Beryllium	< 0.0010	0.0010	"						
Cadmium	< 0.0010	0.0010	"						
Cobalt	< 0.0020	0.0020	"						
Chromium	< 0.0020	0.0020	"						
Copper	0.0132	0.0100	"						
Iron	< 0.100	0.100	"						
Manganese	< 0.0020	0.0020	"						
Nickel	< 0.0020	0.0020	"						
Lead	< 0.0100	0.0100	"						
Antimony	< 0.0200	0.0200	"						
Selenium	< 0.0200	0.0200	"						
Thallium	< 0.0200	0.0200	"						
Vanadium	< 0.0100	0.0100	"						
Zinc	< 0.0400	0.0400	"						

Method Blank Spike (0700385-BS1)

Prepared: 11/08/07 Analyzed: 01/02/08

Silver	0.0774	0.0080	mg/L	0.0750	103	85-115
Aluminum	1.80	0.100	"	2.00	90.1	85-115
Arsenic	0.819	0.0200	"	0.800	102	85-115
Barium	0.239	0.0040	"	0.200	119	85-115
Beryllium	0.197	0.0010	"	0.200	98.6	85-115
Cadmium	0.199	0.0010	"	0.200	99.3	85-115
Cobalt	0.204	0.0020	"	0.200	102	85-115
Chromium	0.398	0.0020	"	0.400	99.6	85-115
Copper	0.330	0.0100	"	0.300	110	85-115
Iron	2.93	0.100	"	3.00	97.7	85-115
Manganese	0.203	0.0020	"	0.200	101	85-115
Nickel	0.501	0.0020	"	0.500	100	85-115
Lead	1.03	0.0100	"	1.00	103	85-115
Antimony	0.793	0.0200	"	0.800	99.2	85-115
Selenium	1.86	0.0200	"	2.00	92.8	85-115
Thallium	2.04	0.0200	"	2.00	102	85-115
Vanadium	0.295	0.0100	"	0.300	98.3	85-115
Zinc	0.275	0.0400	"	0.200	138	85-115

SPLP Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch 0700385 - EPA 200.7

Duplicate (0700385-DUP1)	Source: 8710011-03			Prepared: 11/08/07 Analyzed: 01/02/08				
Silver	0.0040	0.0080	mg/L		0.0037		5.93	20
Aluminum	0.330	0.100	"		0.322		2.34	20
Arsenic	1.12	0.0200	"		1.12		0.190	20
Barium	1.52	0.0040	"		1.55		1.52	20
Beryllium	< 0.0010	0.0010	"		< 0.0010			20
Cadmium	< 0.0010	0.0010	"		0.0005			20
Cobalt	< 0.0020	0.0020	"		0.0003			20
Chromium	< 0.0020	0.0020	"		< 0.0020			20
Copper	0.0188	0.0100	"		0.0202		7.27	20
Iron	< 0.100	0.100	"		< 0.100			20
Manganese	< 0.0020	0.0020	"		< 0.0020			20
Nickel	< 0.0020	0.0020	"		< 0.0020			20
Lead	< 0.0100	0.0100	"		< 0.0100			20
Antimony	4.02	0.0200	"		4.00		0.504	20
Selenium	0.0971	0.0200	"		0.0928		4.45	20
Thallium	< 0.0200	0.0200	"		< 0.0200			20
Vanadium	0.0060	0.0100	"		0.0065		8.89	20
Zinc	0.0547	0.0400	"		0.0691		23.3	20

Matrix Spike (0700385-MS1)	Source: 8710011-03			Prepared: 11/08/07 Analyzed: 01/02/08				
Silver	0.0809	0.0080	mg/L	0.0750	0.0037	103	80-120	
Aluminum	2.12	0.100	"	2.00	0.322	89.7	80-120	
Arsenic	1.93	0.0200	"	0.800	1.12	100	80-120	
Barium	1.74	0.0040	"	0.200	1.55	95.1	80-120	
Beryllium	0.198	0.0010	"	0.200	< 0.0010	99.1	80-120	
Cadmium	0.195	0.0010	"	0.200	0.0005	97.2	80-120	
Cobalt	0.201	0.0020	"	0.200	0.0003	100	80-120	
Chromium	0.392	0.0020	"	0.400	< 0.0020	98.0	80-120	
Copper	0.338	0.0100	"	0.300	0.0202	106	80-120	
Iron	2.89	0.100	"	3.00	< 0.100	96.3	80-120	
Manganese	0.197	0.0020	"	0.200	< 0.0020	98.7	80-120	
Nickel	0.493	0.0020	"	0.500	< 0.0020	98.5	80-120	
Lead	1.01	0.0100	"	1.00	< 0.0100	101	80-120	
Antimony	4.81	0.0200	"	0.800	4.00	101	80-120	
Selenium	1.93	0.0200	"	2.00	0.0928	91.7	80-120	
Thallium	1.99	0.0200	"	2.00	< 0.0200	99.7	80-120	
Vanadium	0.301	0.0100	"	0.300	0.0065	98.3	80-120	
Zinc	0.258	0.0400	"	0.200	0.0691	94.3	80-120	

SPLP Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch 0700385 - EPA 200.7

Matrix Spike Dup (0700385-MSD1)	Source: 8710011-03			Prepared: 11/08/07 Analyzed: 01/02/08					
Silver	0.0809	0.0080	mg/L	0.0750	0.0037	103	80-120	0.0114	20
Aluminum	2.14	0.100	"	2.00	0.322	91.1	80-120	1.51	20
Arsenic	1.91	0.0200	"	0.800	1.12	98.4	80-120	1.88	20
Barium	1.73	0.0040	"	0.200	1.55	92.2	80-120	3.14	20
Beryllium	0.199	0.0010	"	0.200	< 0.0010	99.6	80-120	0.548	20
Cadmium	0.194	0.0010	"	0.200	0.0005	96.6	80-120	0.580	20
Cobalt	0.200	0.0020	"	0.200	0.0003	100	80-120	0.311	20
Chromium	0.391	0.0020	"	0.400	< 0.0020	97.7	80-120	0.272	20
Copper	0.342	0.0100	"	0.300	0.0202	107	80-120	1.11	20
Iron	2.92	0.100	"	3.00	< 0.100	97.2	80-120	0.925	20
Manganese	0.199	0.0020	"	0.200	< 0.0020	99.7	80-120	0.955	20
Nickel	0.491	0.0020	"	0.500	< 0.0020	98.3	80-120	0.250	20
Lead	1.00	0.0100	"	1.00	< 0.0100	100	80-120	0.490	20
Antimony	4.79	0.0200	"	0.800	4.00	98.4	80-120	2.76	20
Selenium	1.90	0.0200	"	2.00	0.0928	90.2	80-120	1.70	20
Thallium	1.99	0.0200	"	2.00	< 0.0200	99.7	80-120	0.0866	20
Vanadium	0.303	0.0100	"	0.300	0.0065	98.7	80-120	0.482	20
Zinc	0.274	0.0400	"	0.200	0.0691	102	80-120	8.13	20

Batch 7L20004 - 0700385

Serial Dilution (7L20004-SRD1)	Source: 8710011-03			Prepared: 11/26/07 Analyzed: 01/02/08					
Silver	< 0.0400	0.0400	mg/L		0.0037				10
Aluminum	0.330	0.500	"		0.322			2.39	10
Arsenic	1.10	0.100	"		1.12			2.40	10
Barium	1.52	0.0200	"		1.55			1.90	10
Beryllium	< 0.0050	0.0050	"		< 0.0050				10
Cadmium	< 0.0050	0.0050	"		0.0005				10
Cobalt	0.0016	0.0100	"		0.0003				10
Chromium	< 0.0100	0.0100	"		< 0.0100				10
Copper	< 0.0500	0.0500	"		0.0202				10
Iron	< 0.500	0.500	"		< 0.500				10
Manganese	< 0.0100	0.0100	"		< 0.0100				10
Nickel	< 0.0100	0.0100	"		< 0.0100				10
Lead	< 0.0500	0.0500	"		< 0.0500				10
Antimony	3.99	0.100	"		4.00			0.192	10
Selenium	< 0.100	0.100	"		0.0928				10
Thallium	0.0714	0.100	"		< 0.100				10
Vanadium	< 0.0500	0.0500	"		0.0065				10
Zinc	< 0.200	0.200	"		0.0691				10

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch 0800002 - EPA 200.7

Method Blank (0800002-BLK1)				Prepared & Analyzed: 01/02/08				
Aluminum	< 100	100	ug/L					
Barium	< 4	4	"					
Beryllium	< 1	1	"					
Cobalt	< 2	2	"					
Chromium	< 2	2	"					
Copper	< 10	10	"					
Iron	< 100	100	"					
Manganese	< 2	2	"					
Vanadium	< 10	10	"					
Zinc	< 40	40	"					
Method Blank (0800002-BLK2)				Prepared & Analyzed: 01/02/08				
Aluminum	< 100	100	ug/L					
Barium	< 4	4	"					
Beryllium	< 1	1	"					
Cobalt	< 2	2	"					
Chromium	< 2	2	"					
Copper	< 10	10	"					
Iron	< 100	100	"					
Manganese	< 2	2	"					
Vanadium	< 10	10	"					
Zinc	< 40	40	"					
Method Blank Spike (0800002-BS1)				Prepared & Analyzed: 01/02/08				
Aluminum	1746	100	ug/L	2000	87.3	85-115		
Barium	187.4	4	"	200	93.7	85-115		
Beryllium	199.1	1	"	200	99.5	85-115		
Cobalt	206.7	2	"	200	103	85-115		
Chromium	406.0	2	"	400	101	85-115		
Copper	327.4	10	"	300	109	85-115		
Iron	2950	100	"	3000	98.3	85-115		
Manganese	199.9	2	"	200	100	85-115		
Vanadium	304.2	10	"	300	101	85-115		
Zinc	205.8	40	"	200	103	85-115		

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 0800002 - EPA 200.7									
Duplicate (0800002-DUP1)									
Source: 8711012-01 Prepared & Analyzed: 01/02/08									
Aluminum	< 100	100	ug/L		< 100			20	
Barium	28.5	4	"		28.6		0.282	20	
Beryllium	< 1	1	"		< 1			20	
Cobalt	< 2	2	"		< 2			20	
Chromium	< 2	2	"		< 2			20	
Copper	4.8	10	"		4.3		11.7	20	
Iron	< 100	100	"		< 100			20	
Manganese	< 2	2	"		< 2			20	
Vanadium	< 10	10	"		2.3			20	
Zinc	< 40	40	"		< 40			20	
Duplicate (0800002-DUP2)									
Source: 8712004-01 Prepared & Analyzed: 01/02/08									
Aluminum	< 100	100	ug/L		< 100			20	
Barium	12.1	4	"		12.1		0.439	20	
Beryllium	< 1	1	"		< 1			20	
Cobalt	< 2	2	"		< 2			20	
Chromium	< 2	2	"		< 2			20	
Copper	20.8	10	"		20.9		0.785	20	
Iron	< 100	100	"		< 100			20	
Manganese	5.6	2	"		5.9		4.88	20	
Vanadium	< 10	10	"		< 10			20	
Zinc	939.2	40	"		960.1		2.20	20	
Matrix Spike (0800002-MS1)									
Source: 8711012-01 Prepared & Analyzed: 01/02/08									
Aluminum	1781	100	ug/L	2000	< 100	89.1	80-120		
Barium	217.3	4	"	200	28.6	94.3	80-120		
Beryllium	206.0	1	"	200	< 1	103	80-120		
Cobalt	199.3	2	"	200	< 2	99.7	80-120		
Chromium	391.1	2	"	400	< 2	97.8	80-120		
Copper	318.2	10	"	300	4.3	105	80-120		
Iron	2942	100	"	3000	< 100	98.1	80-120		
Manganese	198.2	2	"	200	< 2	99.1	80-120		
Vanadium	305.4	10	"	300	2.3	101	80-120		
Zinc	206.3	40	"	200	< 40	103	80-120		

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch 0800002 - EPA 200.7

Matrix Spike (0800002-MS2)		Source: 8712004-01		Prepared & Analyzed: 01/02/08					
Aluminum	1786	100	ug/L	2000	< 100	89.3	80-120		
Barium	204.4	4	"	200	12.1	96.1	80-120		
Beryllium	206.0	1	"	200	< 1	103	80-120		
Cobalt	208.0	2	"	200	< 2	104	80-120		
Chromium	397.4	2	"	400	< 2	99.3	80-120		
Copper	341.1	10	"	300	20.9	107	80-120		
Iron	2975	100	"	3000	< 100	99.2	80-120		
Manganese	207.6	2	"	200	5.9	101	80-120		
Vanadium	305.4	10	"	300	< 10	102	80-120		
Zinc	1142	40	"	200	960.1	90.9	80-120		
Matrix Spike Dup (0800002-MSD1)		Source: 8711012-01		Prepared & Analyzed: 01/02/08					
Aluminum	1774	100	ug/L	2000	< 100	88.7	80-120	0.432	20
Barium	217.7	4	"	200	28.6	94.5	80-120	0.199	20
Beryllium	206.9	1	"	200	< 1	103	80-120	0.406	20
Cobalt	200.8	2	"	200	< 2	100	80-120	0.729	20
Chromium	393.7	2	"	400	< 2	98.4	80-120	0.664	20
Copper	318.9	10	"	300	4.3	105	80-120	0.215	20
Iron	2966	100	"	3000	< 100	98.9	80-120	0.816	20
Manganese	198.0	2	"	200	< 2	99.0	80-120	0.133	20
Vanadium	307.8	10	"	300	2.3	102	80-120	0.780	20
Zinc	207.0	40	"	200	< 40	103	80-120	0.314	20
Matrix Spike Dup (0800002-MSD2)		Source: 8712004-01		Prepared & Analyzed: 01/02/08					
Aluminum	1786	100	ug/L	2000	< 100	89.3	80-120	0.00515	20
Barium	203.6	4	"	200	12.1	95.7	80-120	0.369	20
Beryllium	205.2	1	"	200	< 1	103	80-120	0.354	20
Cobalt	208.5	2	"	200	< 2	104	80-120	0.217	20
Chromium	396.6	2	"	400	< 2	99.2	80-120	0.191	20
Copper	340.1	10	"	300	20.9	106	80-120	0.283	20
Iron	2946	100	"	3000	< 100	98.2	80-120	0.981	20
Manganese	205.9	2	"	200	5.9	100	80-120	0.817	20
Vanadium	303.1	10	"	300	< 10	101	80-120	0.733	20
Zinc	1123	40	"	200	960.1	81.3	80-120	1.70	20

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 0800003 - EPA 200.8									
Method Blank (0800003-BLK1)									
Prepared: 01/03/08 Analyzed: 01/04/08									
Nickel	< 1.0	1.0	ug/L						
Arsenic	< 4.0	4.0	"						
Selenium	< 1.0	1.0	"						
Silver	< 0.5	0.5	"						
Cadmium	< 0.2	0.2	"						
Antimony	< 1.0	1.0	"						
Thallium	< 0.3	0.3	"						
Lead	< 1.0	1.0	"						
Method Blank (0800003-BLK2)									
Prepared: 01/03/08 Analyzed: 01/04/08									
Nickel	< 1.0	1.0	ug/L						
Arsenic	< 4.0	4.0	"						
Selenium	< 1.0	1.0	"						
Silver	< 0.5	0.5	"						
Cadmium	< 0.2	0.2	"						
Antimony	< 1.0	1.0	"						
Thallium	< 0.3	0.3	"						
Lead	< 1.0	1.0	"						
Method Blank Spike (0800003-BS1)									
Prepared: 01/03/08 Analyzed: 01/04/08									
Nickel	193	1.0	ug/L	200	96.6	85-115			
Arsenic	96.6	4.0	"	100	96.6	85-115			
Selenium	48.4	1.0	"	50.0	96.9	85-115			
Silver	49.7	0.5	"	50.0	99.3	85-115			
Cadmium	49.1	0.2	"	50.0	98.1	85-115			
Antimony	192	1.0	"	200	96.0	85-115			
Thallium	50.6	0.3	"	50.0	101	85-115			
Lead	96.0	1.0	"	100	96.0	85-115			

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 0800003 - EPA 200.8									
Duplicate (0800003-DUP1)									
Source: 8711012-02 Prepared: 01/03/08 Analyzed: 01/04/08									
Nickel	1.08	1.0	ug/L		1.12			4.06	20
Arsenic	20.4	4.0	"		20.8			1.69	20
Selenium	< 1.0	1.0	"		0.42				20
Silver	< 0.5	0.5	"		< 0.5				20
Cadmium	< 0.2	0.2	"		< 0.2				20
Antimony	2.29	1.0	"		2.30			0.412	20
Thallium	< 0.3	0.3	"		< 0.3				20
Lead	< 1.0	1.0	"		< 1.0				20
Duplicate (0800003-DUP2)									
Source: 8712004-02 Prepared: 01/03/08 Analyzed: 01/04/08									
Nickel	< 1.0	1.0	ug/L		< 1.0				20
Arsenic	< 4.0	4.0	"		< 4.0				20
Selenium	0.54	1.0	"		< 1.0				20
Silver	< 0.5	0.5	"		< 0.5				20
Cadmium	0.13	0.2	"		0.11			13.9	20
Antimony	< 1.0	1.0	"		< 1.0				20
Thallium	< 0.3	0.3	"		< 0.3				20
Lead	0.57	1.0	"		0.61			5.95	20
Matrix Spike (0800003-MS1)									
Source: 8711012-02 Prepared: 01/03/08 Analyzed: 01/04/08									
Nickel	190	1.0	ug/L	200	1.12	94.2	80-120		
Arsenic	119	4.0	"	100	20.8	98.5	80-120		
Selenium	50.6	1.0	"	50.0	0.42	100	80-120		
Silver	48.1	0.5	"	50.0	< 0.5	96.2	80-120		
Cadmium	49.3	0.2	"	50.0	< 0.2	98.5	80-120		
Antimony	200	1.0	"	200	2.30	98.8	80-120		
Thallium	51.8	0.3	"	50.0	< 0.3	104	80-120		
Lead	96.9	1.0	"	100	< 1.0	96.9	80-120		

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 0800003 - EPA 200.8									
Matrix Spike (0800003-MS2) Source: 8712004-02 Prepared: 01/03/08 Analyzed: 01/04/08									
Nickel	199	1.0	ug/L	200	< 1.0	99.7	80-120		
Arsenic	102	4.0	"	100	< 4.0	102	80-120		
Selenium	54.1	1.0	"	50.0	< 1.0	108	80-120		
Silver	50.8	0.5	"	50.0	< 0.5	102	80-120		
Cadmium	50.8	0.2	"	50.0	0.11	101	80-120		
Antimony	197	1.0	"	200	< 1.0	98.6	80-120		
Thallium	51.8	0.3	"	50.0	< 0.3	104	80-120		
Lead	100	1.0	"	100	0.61	99.9	80-120		
Matrix Spike Dup (0800003-MSD1) Source: 8711012-02 Prepared: 01/03/08 Analyzed: 01/04/08									
Nickel	192	1.0	ug/L	200	1.12	95.6	80-120	1.41	20
Arsenic	120	4.0	"	100	20.8	99.3	80-120	0.659	20
Selenium	50.9	1.0	"	50.0	0.42	101	80-120	0.538	20
Silver	48.9	0.5	"	50.0	< 0.5	97.9	80-120	1.68	20
Cadmium	50.2	0.2	"	50.0	< 0.2	100	80-120	1.82	20
Antimony	204	1.0	"	200	2.30	101	80-120	1.90	20
Thallium	51.9	0.3	"	50.0	< 0.3	104	80-120	0.160	20
Lead	98.5	1.0	"	100	< 1.0	98.5	80-120	1.67	20
Matrix Spike Dup (0800003-MSD2) Source: 8712004-02 Prepared: 01/03/08 Analyzed: 01/04/08									
Nickel	201	1.0	ug/L	200	< 1.0	101	80-120	0.959	20
Arsenic	103	4.0	"	100	< 4.0	103	80-120	0.678	20
Selenium	55.5	1.0	"	50.0	< 1.0	111	80-120	2.52	20
Silver	50.4	0.5	"	50.0	< 0.5	101	80-120	0.758	20
Cadmium	51.8	0.2	"	50.0	0.11	103	80-120	1.95	20
Antimony	195	1.0	"	200	< 1.0	97.6	80-120	0.996	20
Thallium	52.2	0.3	"	50.0	< 0.3	104	80-120	0.780	20
Lead	99.8	1.0	"	100	0.61	99.2	80-120	0.686	20

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8A02003 - 0800002									
Serial Dilution (8A02003-SRD1)									
Source: 8711012-01 Prepared & Analyzed: 01/02/08									
Aluminum	< 500	500	ug/L		< 500			10	
Barium	26.7	20	"		28.6		6.80	10	
Beryllium	< 5	5	"		< 5			10	
Cobalt	< 10	10	"		< 10			10	
Chromium	< 10	10	"		< 10			10	
Copper	33.0	50	"		4.3			10	
Iron	< 500	500	"		< 500			10	
Manganese	< 10	10	"		< 10			10	
Vanadium	< 50	50	"		2.3			10	
Zinc	46.3	200	"		< 200			10	
Serial Dilution (8A02003-SRD2)									
Source: 8712004-01 Prepared & Analyzed: 01/02/08									
Aluminum	< 500	500	ug/L		< 500			10	
Barium	< 20	20	"		12.1			10	
Beryllium	< 5	5	"		< 5			10	
Cobalt	< 10	10	"		< 10			10	
Chromium	< 10	10	"		< 10			10	
Copper	< 50	50	"		20.9			10	
Iron	< 500	500	"		< 500			10	
Manganese	< 10	10	"		5.9			10	
Vanadium	< 50	50	"		< 50			10	
Zinc	902.4	200	"		960.1		6.20	10	
Batch 8A03001 - 0800003									
Serial Dilution (8A03001-SRD1)									
Source: 8711012-02 Prepared: 01/03/08 Analyzed: 01/04/08									
Nickel	< 5.0	5.0	ug/L		1:12			10	
Arsenic	19.9	20.0	"		20.8		4.34	10	
Selenium	< 5.0	5.0	"		0.42			10	
Silver	< 2.5	2.5	"		< 2.5			10	
Cadmium	< 1.0	1.0	"		< 1.0			10	
Antimony	4.27	5.0	"		2.30			10	
Thallium	< 1.5	1.5	"		< 1.5			10	
Lead	< 5.0	5.0	"		< 5.0			10	

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch 8A03001 - 0800003

Serial Dilution (8A03001-SRD2) Source: 8712004-02 Prepared: 01/03/08 Analyzed: 01/04/08

Nickel	< 5.0	5.0	ug/L		< 5.0			10
Arsenic	< 20.0	20.0	"		< 20.0			10
Selenium	< 5.0	5.0	"		< 5.0			10
Silver	< 2.5	2.5	"		< 2.5			10
Cadmium	0.34	1.0	"		0.11			10
Antimony	< 5.0	5.0	"		< 5.0			10
Thallium	< 1.5	1.5	"		< 1.5			10
Lead	< 5.0	5.0	"		0.61			10

Metals (Total) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch 0700329 - EPA 200.7**Method Blank (0700329-BLK1)**

Prepared: 11/08/07 Analyzed: 11/28/07

Silver	< 0.8	0.8	mg/kg						
Aluminum	< 10.0	10.0	"						
Arsenic	< 2.0	2.0	"						
Barium	< 0.4	0.4	"						
Beryllium	< 0.1	0.1	"						
Cadmium	< 0.1	0.1	"						
Cobalt	< 0.2	0.2	"						
Chromium	< 0.2	0.2	"						
Copper	31.3	1.0	"						
Iron	< 10.0	10.0	"						
Manganese	< 0.2	0.2	"						
Nickel	< 0.2	0.2	"						
Lead	< 1.0	1.0	"						
Antimony	< 2.0	2.0	"						
Selenium	< 2.0	2.0	"						
Thallium	< 2.0	2.0	"						
Vanadium	< 1.0	1.0	"						
Zinc	377	4.0	"						

Method Blank Spike (0700329-BS1)

Prepared: 11/08/07 Analyzed: 11/28/07

Silver	6.69	0.8	mg/kg	7.50	89.2	85-115
Aluminum	179	10.0	"	200	89.3	85-115
Arsenic	82.1	2.0	"	80.0	103	85-115
Barium	20.3	0.4	"	20.0	101	85-115
Beryllium	20.2	0.1	"	20.0	101	85-115
Cadmium	20.4	0.1	"	20.0	102	85-115
Cobalt	20.6	0.2	"	20.0	103	85-115
Chromium	41.1	0.2	"	40.0	103	85-115
Copper	61.1	1.0	"	30.0	204	85-115
Iron	301	10.0	"	300	100	85-115
Manganese	20.6	0.2	"	20.0	103	85-115
Nickel	51.6	0.2	"	50.0	103	85-115
Lead	104	1.0	"	100	104	85-115
Antimony	80.1	2.0	"	80.0	100	85-115
Selenium	181	2.0	"	200	90.7	85-115
Thallium	211	2.0	"	200	105	85-115
Vanadium	30.0	1.0	"	30.0	99.9	85-115
Zinc	428	4.0	"	20.0	NR	85-115

Metals (Total) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch 0700329 - EPA 200.7

Duplicate (0700329-DUP1)	Source: 8710011-03			Prepared: 11/08/07 Analyzed: 11/28/07				
Silver	71.7	7.8	mg/kg		72.7		1.48	35
Aluminum	15100	97.7	"		15000		0.0842	35
Arsenic	2390	19.5	"		2700		12.0	35
Barium	557	3.9	"		541		2.97	35
Beryllium	1.64	1.0	"		1.62		1.19	35
Cadmium	8.41	1.0	"		7.92		5.98	35
Cobalt	117	2.0	"		122		3.49	35
Chromium	69.9	2.0	"		78.8		12.0	35
Copper	15300	9.8	"		16600		8.36	35
Iron	194000	97.7	"		198000		1.93	35
Manganese	13600	2.0	"		13800		1.78	35
Nickel	91.2	2.0	"		108		16.9	35
Lead	6640	9.8	"		6090		8.57	35
Antimony	286	19.5	"		345		18.7	35
Selenium	71.2	19.5	"		77.6		8.66	35
Thallium	< 19.5	19.5	"		< 19.5			35
Vanadium	65.4	9.8	"		64.2		1.94	35
Zinc	115000	39.1	"		108000		6.38	35

Matrix Spike (0700329-MS1)	Source: 8710011-03			Prepared: 11/08/07 Analyzed: 11/28/07				
Silver	70.0	8.0	mg/kg	7.47	72.7	NR	70-130	
Aluminum	15100	99.7	"	199	15000	13.4	70-130	
Arsenic	2600	19.9	"	79.7	2700	NR	70-130	
Barium	599	4.0	"	19.9	541	290	70-130	
Beryllium	22.1	1.0	"	19.9	1.62	103	70-130	
Cadmium	27.2	1.0	"	19.9	7.92	96.6	70-130	
Cobalt	136	2.0	"	19.9	122	71.2	70-130	
Chromium	109	2.0	"	39.9	78.8	76.4	70-130	
Copper	16100	10.0	"	29.9	16600	NR	70-130	
Iron	190000	99.7	"	299	198000	NR	70-130	
Manganese	13400	2.0	"	19.9	13800	NR	70-130	
Nickel	149	2.0	"	49.8	108	82.0	70-130	
Lead	6350	10.0	"	99.7	6090	263	70-130	
Antimony	357	19.9	"	79.7	345	15.0	70-130	
Selenium	250	19.9	"	199	77.6	86.7	70-130	
Thallium	197	19.9	"	199	< 19.9	98.9	70-130	
Vanadium	95.0	10.0	"	29.9	64.2	103	70-130	
Zinc	110000	39.9	"	19.9	108000	NR	70-130	

Metals (Total) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch 0700329 - EPA 200.7

Matrix Spike Dup (0700329-MSD1)		Source: 8710011-03		Prepared: 11/08/07		Analyzed: 11/28/07			
Silver	75.2	7.9	mg/kg	7.44	72.7	33.4	70-130	7.17	35
Aluminum	14700	99.2	"	198	15000	NR	70-130	2.61	35
Arsenic	3200	19.8	"	79.3	2700	638	70-130	20.8	35
Barium	623	4.0	"	19.8	541	415	70-130	4.01	35
Beryllium	22.2	1.0	"	19.8	1.62	104	70-130	0.440	35
Cadmium	27.4	1.0	"	19.8	7.92	98.0	70-130	0.694	35
Cobalt	140	2.0	"	19.8	122	95.3	70-130	3.40	35
Chromium	115	2.0	"	39.7	78.8	90.8	70-130	4.98	35
Copper	19300	9.9	"	29.8	16600	NR	70-130	18.4	35
Iron	194000	99.2	"	298	198000	NR	70-130	1.96	35
Manganese	13700	2.0	"	19.8	13800	NR	70-130	2.17	35
Nickel	181	2.0	"	49.6	108	147	70-130	19.5	35
Lead	5840	9.9	"	99.2	6090	NR	70-130	8.39	35
Antimony	550	19.8	"	79.3	345	258	70-130	42.5	35
Selenium	258	19.8	"	198	77.6	90.9	70-130	2.90	35
Thallium	196	19.8	"	198	< 19.8	98.6	70-130	0.778	35
Vanadium	95.1	9.9	"	29.8	64.2	104	70-130	0.107	35
Zinc	103000	39.7	"	19.8	108000	NR	70-130	7.25	35
Post Spike (0700329-PS1)		Source: 8710011-03		Prepared: 11/08/07		Analyzed: 11/28/07			
Silver	1.30		mg/L	0.750	0.73	75.7	70-130		
Aluminum	167		"	20.0	150	83.3	70-130		
Arsenic	34.2		"	8.00	27.0	91.0	70-130		
Barium	7.39		"	2.00	5.41	99.1	70-130		
Beryllium	1.95		"	2.00	0.02	96.8	70-130		
Cadmium	1.92		"	2.00	0.08	92.1	70-130		
Cobalt	3.05		"	2.00	1.22	91.5	70-130		
Chromium	4.63		"	4.00	0.79	96.0	70-130		
Copper	166		"	3.00	166	NR	70-130		
Iron	1990		"	30.0	1980	56.4	70-130		
Manganese	139		"	2.00	138	50.9	70-130		
Nickel	5.69		"	5.00	1.08	92.2	70-130		
Lead	67.2		"	10.0	60.9	62.9	70-130		
Antimony	11.2		"	8.00	3.45	97.1	70-130		
Selenium	19.3		"	20.0	0.78	92.7	70-130		
Thallium	19.4		"	20.0	-0.03	97.2	70-130		
Vanadium	3.55		"	3.00	0.64	96.9	70-130		
Zinc	1070		"	2.00	1080	NR	70-130		

Metals (Total) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 0700329 - EPA 200.7									
Post Spike (0700329-PS2)									
Source: 8710011-03 Prepared: 11/08/07 Analyzed: 11/28/07									
Silver	1.30		mg/L	0.750	0.73	76.1	70-130		
Aluminum	161	"		20.0	150	55.3	70-130		
Arsenic	34.3	"		8.00	27.0	91.6	70-130		
Barium	7.15	"		2.00	5.41	86.9	70-130		
Beryllium	1.94	"		2.00	0.02	96.0	70-130		
Cadmium	1.95	"		2.00	0.08	93.4	70-130		
Cobalt	3.07	"		2.00	1.22	92.5	70-130		
Chromium	4.58	"		4.00	0.79	94.9	70-130		
Copper	163	"		3.00	166	NR	70-130		
Iron	1930	"		30.0	1980	NR	70-130		
Manganese	134	"		2.00	138	NR	70-130		
Nickel	5.73	"		5.00	1.08	93.0	70-130		
Lead	67.5	"		10.0	60.9	65.5	70-130		
Antimony	11.2	"		8.00	3.45	97.1	70-130		
Selenium	19.5	"		20.0	0.78	93.8	70-130		
Thallium	19.6	"		20.0	-0.03	98.0	70-130		
Vanadium	3.51	"		3.00	0.64	95.7	70-130		
Zinc	1060	"		2.00	1080	NR	70-130		
Reference (0700329-SRM1)									
Prepared: 11/08/07 Analyzed: 11/28/07									
Silver	< 0.7	0.7	mg/kg	0.715		15.4-185			
Aluminum	7090	9.2	"	9720		72.9	16.6-183		
Arsenic	140	1.8	"	118		119	84.5-116		
Barium	218	0.4	"	202		108	82.3-118		
Beryllium	2.73	0.09	"	2.34		117	82.7-117		
Cadmium	90.9	0.09	"	81.8		111	88.6-112		
Cobalt	98.1	0.2	"	87.3		112	86.5-113		
Chromium	105	0.2	"	96.3		109	82.7-118		
Copper	129	0.9	"	87.6		147	89.9-110		
Iron	10100	9.2	"	10800		93.6	32.1-168		
Manganese	256	0.2	"	227		113	77-123		
Nickel	57.0	0.2	"	51.3		111	82.5-118		
Lead	64.1	0.9	"	55.6		115	73.1-127		
Antimony	51.6	1.8	"	72.4		71.2	0-238		
Selenium	94.7	1.8	"	81.5		116	83.8-116		
Thallium	34.2	1.8	"	30.3		113	69.2-131		
Vanadium	110	0.9	"	103		107	68.3-132		
Zinc	511	3.7	"	208		246	74.9-126		

Metals (Total) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7L20001 - 0700329									
Serial Dilution (7L20001-SRD1)									
Source: 8710011-03									
Silver	74.3	39.7	mg/L		72.7			2.05	10
Aluminum	14800	496	"		15000			1.26	10
Arsenic	2700	99.2	"		2700			0.0377	10
Barium	538	19.8	"		541			0.469	10
Beryllium	1.36	5.0	"		1.62			17.7	10
Cadmium	6.32	5.0	"		7.92			22.5	10
Cobalt	123	9.9	"		122			1.34	10
Chromium	78.9	9.9	"		78.8			0.0669	10
Copper	16200	49.6	"		16600			2.66	10
Iron	200000	496	"		198000			1.07	10
Manganese	13900	9.9	"		13800			0.865	10
Nickel	106	9.9	"		108			1.51	10
Lead	6040	49.6	"		6090			0.900	10
Antimony	364	99.2	"		345			5.13	10
Selenium	99.3	99.2	"		77.6			24.5	10
Thallium	< 99.2	99.2	"		< 99.2				10
Vanadium	58.7	49.6	"		64.2			8.90	10
Zinc	117000	198	"		108000			8.48	10

Mercury (Dissolved) by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 0700359 - EPA 7470A Prep									
Method Blank (0700359-BLK1) Prepared & Analyzed: 12/10/07									
Mercury	< 0.10	0.10	ug/L						
Method Blank Spike (0700359-BS1) Prepared & Analyzed: 12/10/07									
Mercury	1.02	0.10	ug/L	1.00		102	85-115		
Duplicate (0700359-DUP1) Source: 8711012-01 Prepared & Analyzed: 12/10/07									
Mercury	0.05	0.10	ug/L		0.05			4.85	25
Matrix Spike (0700359-MS1) Source: 8711012-01 Prepared & Analyzed: 12/10/07									
Mercury	1.08	0.10	ug/L	1.00	0.05	103	75-125		
Matrix Spike Dup (0700359-MSD1) Source: 8711012-01 Prepared & Analyzed: 12/10/07									
Mercury	1.08	0.10	ug/L	1.00	0.05	103	75-125	0.0549	20
Reference (0700359-SRM1) Prepared & Analyzed: 12/10/07									
Mercury	4.89	0.10	ug/L	5.00		97.8	90-110		
Batch 0700387 - EPA 7470A Prep									
Method Blank (0700387-BLK1) Prepared & Analyzed: 12/21/07									
Mercury	< 0.10	0.10	ug/L						
Method Blank Spike (0700387-BS1) Prepared & Analyzed: 12/21/07									
Mercury	0.99	0.10	ug/L	1.00		99.3	85-115		
Duplicate (0700387-DUP1) Source: 8712004-01 Prepared & Analyzed: 12/21/07									
Mercury	< 0.10	0.10	ug/L		< 0.10				25

Mercury (Dissolved) by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 0700387 - EPA 7470A Prep									
Matrix Spike (0700387-MS1) Source: 8712004-01 Prepared & Analyzed: 12/21/07									
Mercury	1.00	0.10	ug/L	1.00	< 0.10	100	75-125		
Matrix Spike Dup (0700387-MSD1) Source: 8712004-01 Prepared & Analyzed: 12/21/07									
Mercury	1.03	0.10	ug/L	1.00	< 0.10	103	75-125	2.91	20
Reference (0700387-SRM1) Prepared & Analyzed: 12/21/07									
Mercury	4.75	0.10	ug/L	5.00		95.0	90-110		

NOTE:

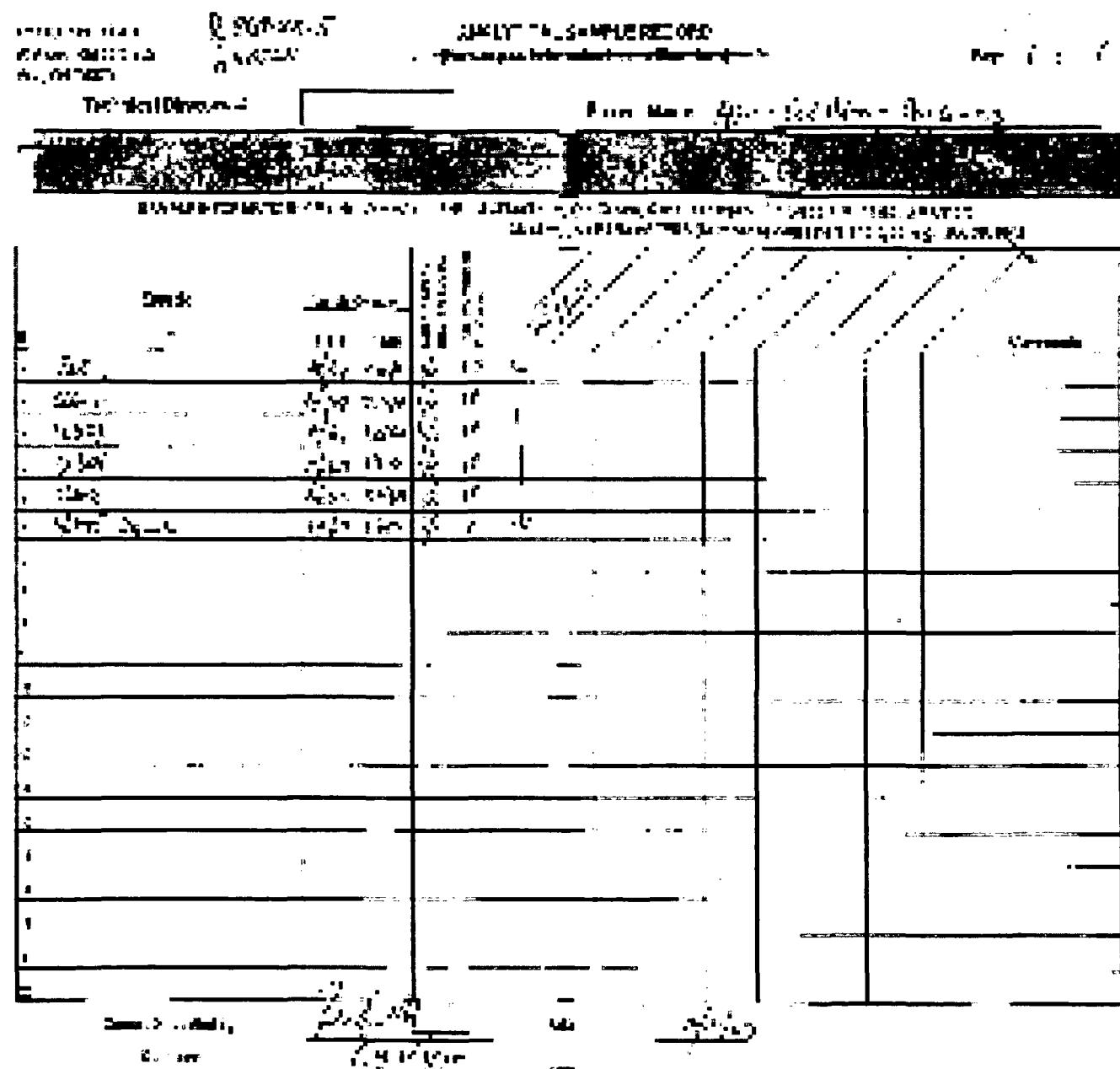
%REC is percent recovery, Result (less sample contribution) divided by the Spike Level

RPD is the Relative Percent Difference (difference between the Result and the Source Result) divided by their average

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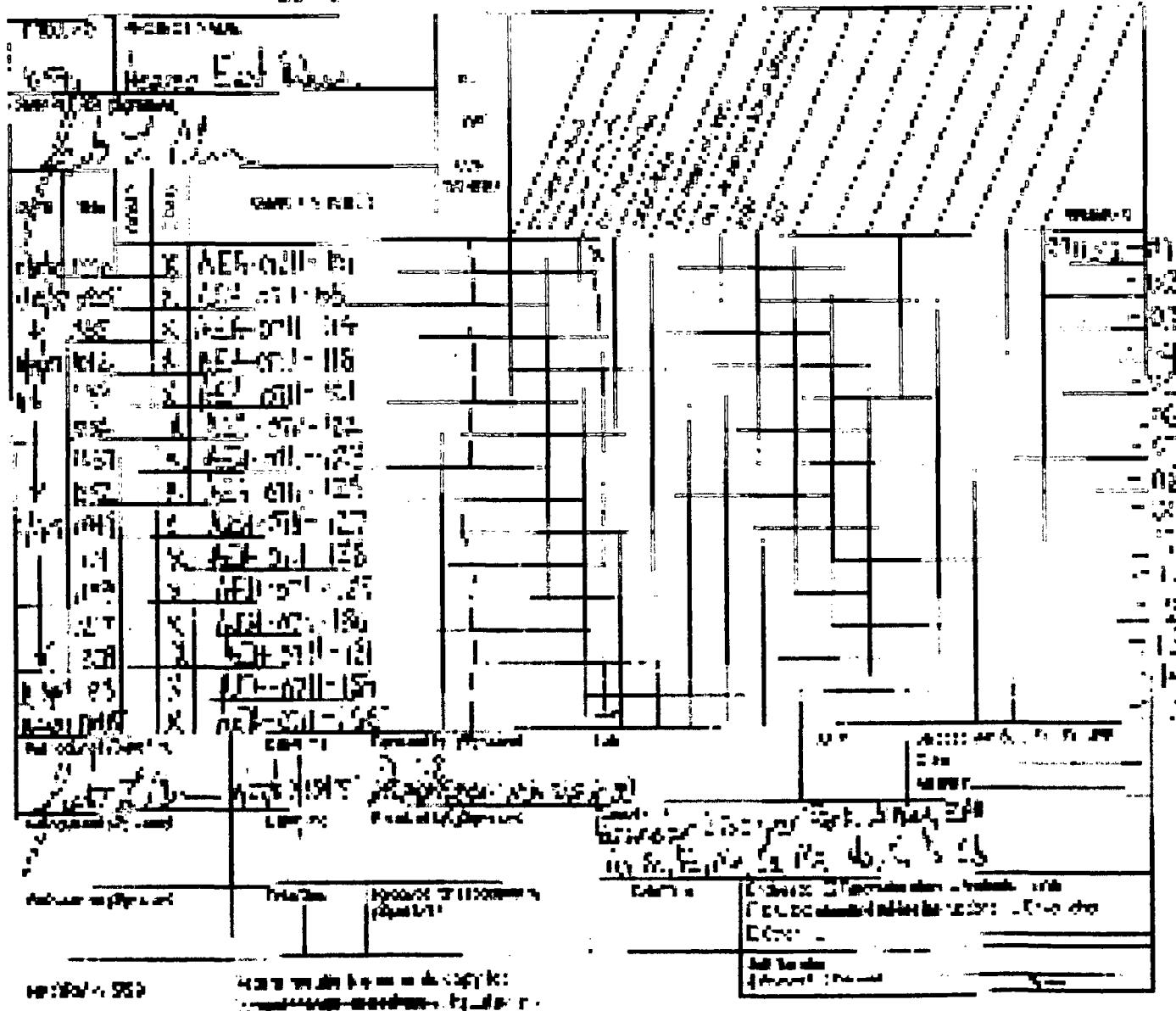
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Page 15

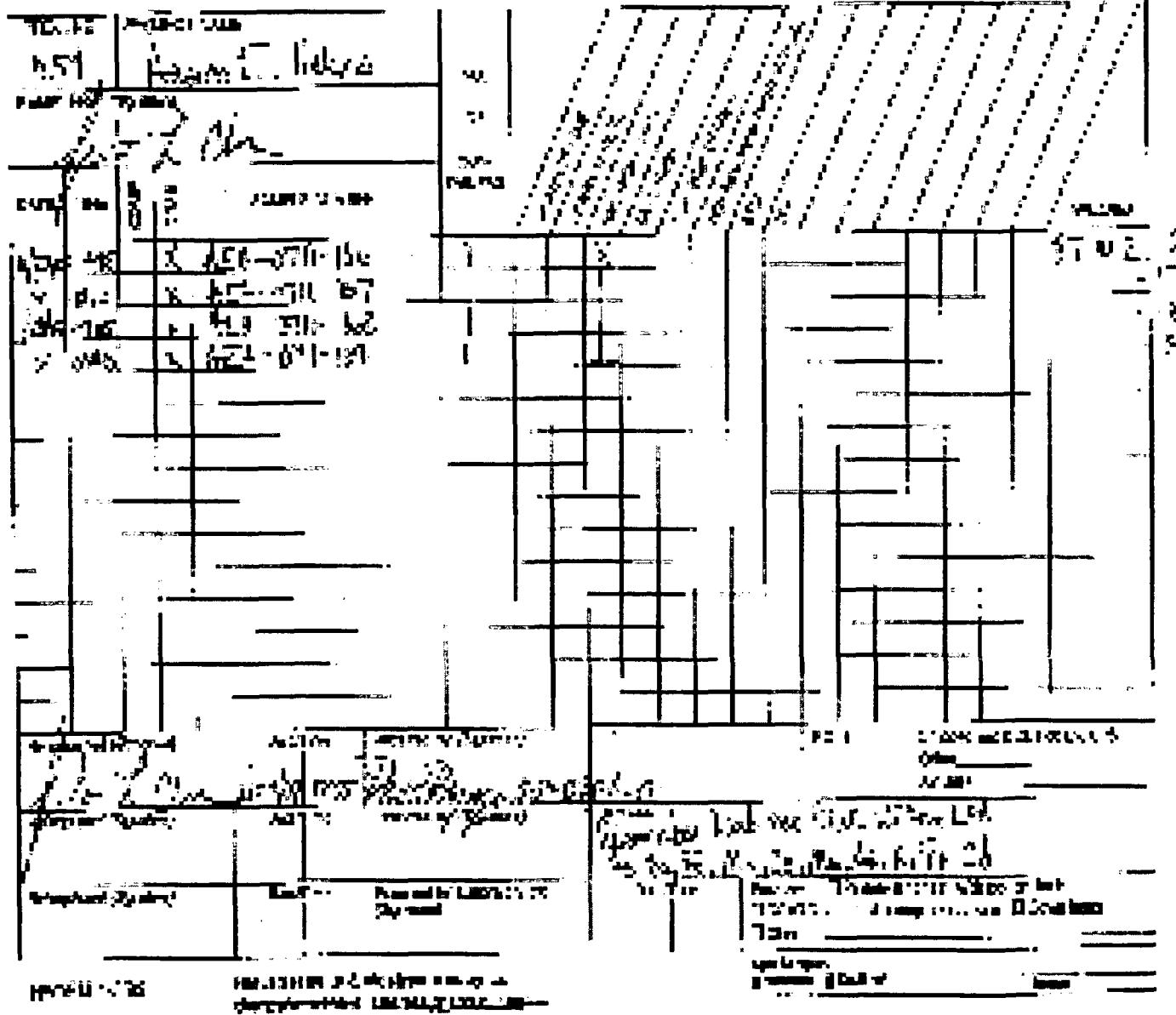


P. 142



DATA ORIGINATOR NUMBER

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Digitized by srujanika@gmail.com

Project: ASARCO LSR No: R808005

Certificate of Analysis

8710011

Date Due: 12/01/2007

TAT: 45

Report To: RCRA-Resource Conservation & Recovery Act
8ENF-RC
Golden, CO 80403

Invoice To: RCRA-Resource Conservation & Recovery Act
8ENF-RC
Golden, CO 80403

Client Contact:

(303) 312-6503
(303) 312-7800

Invoice Contact:

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Format Correct? _____ Test Name vs. C.O.C. & Benchsheet
Report to: vs. C.O.C. _____ Hold times
Attention: vs. C.O.C. _____ Method vs. Benchsheet
Phone: vs. C.O.C. _____ Units vs. Benchsheet
Project Name & Number, PO Number _____ Reporting Limit vs. Benchsheet
Sample ID: vs. C.O.C. _____ Date Analyzed
Sample Type: vs. C.O.C. _____ Results vs. Benchsheet
Date/Time Sampled vs. C.O.C. _____ Qualifiers
Date/Time Received vs. C.O.C. _____

8711012

Date Due: 01/14/2008

TAT: 45

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8ENF-RC
Golden, CO 80403

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Golden, CO 80403

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8711012

Date Due: 01/14/2008

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Project Name & Number, PO Number	_____	Reporting Limit vs. Benchsheet
Sample ID: vs. C.O.C.	_____	Date Analyzed
Sample Type: vs. C.O.C.	_____	Results vs. Benchsheet
Date/Time Sampled vs. C.O.C.	_____	Qualifiers
Date/Time Received vs. C.O.C.	_____	

8712004

Date Due: 02/03/2008

TAT: 45

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Golden, CO 80403

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8ENF-RC
Golden, CO 80403

Client Contact:

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Sub Report	Date/Initials: _____
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Format Correct?	_____	Test Name vs. C.O.C. & Benchsheet
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Attention: vs. C.O.C.	_____	Method vs. Benchsheet
Phone: vs. C.O.C.	_____	Units vs. Benchsheet
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Sample ID: vs. C.O.C.	_____	Date Analyzed
Sample Type: vs. C.O.C.	_____	Results vs. Benchsheet
Date/Time Sampled vs. C.O.C.	_____	Qualifiers
Date/Time Received vs. C.O.C.	_____	
